

IV. RECOMMENDATIONS: UTILITY CORRIDORS

The UCP is intended to serve both as a planning tool and as a means for its own implementation. It is intended to provide guidance to both the municipality and the affected utilities as to the type and location of major utilities to be developed over the next ten to twenty years. It is also designed to express the most appropriate location for facility improvements in order to provide predictability in utility development and yet minimize neighborhood and community impacts.

The UCP, once adopted, is expected to be self-executing. That is, with the approval of the plan map and the associated ordinance amendments, future platting and building decisions are intended to implement the recommendations of this plan through specific plat, conditional use, and building permit approvals, and other public facility and development reviews. These actions shall be generally consistent with the corridor location and corridor width recommendations of this plan.

1. PROCESS OF PLAN DEVELOPMENT

The recommendations included herein are the result of extensive discussions with both the affected utilities and the public. The process of plan development included the following sequential steps:

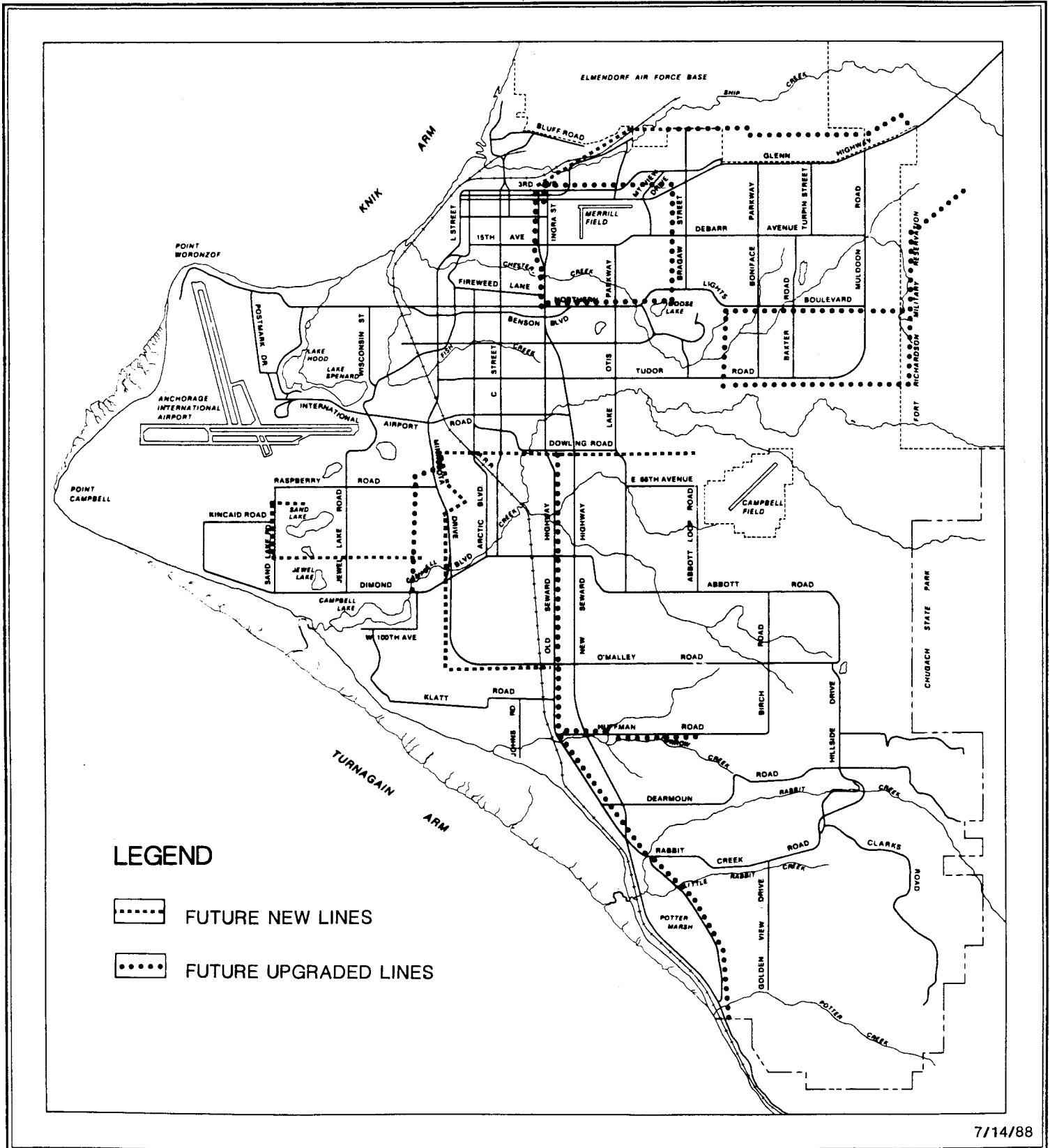
- a. Identification of current major transmission corridors;
- b. Identification of probable future major transmission corridors;
- c. Identification of impacts of probable alignments relative to environmental, community, and fiscal considerations, including costs (if any) to road construction agencies if a joint road/utility corridor is to be considered;
- d. Realignment and/or elimination of potential utility corridors;
- e. Utility and public review of initial plan recommendations, including modifications to initial plan recommendations; and
- f. Finalization of the draft UCP, and review of its recommendations by the public and affected agencies.

2. PLAN RECOMMENDATIONS

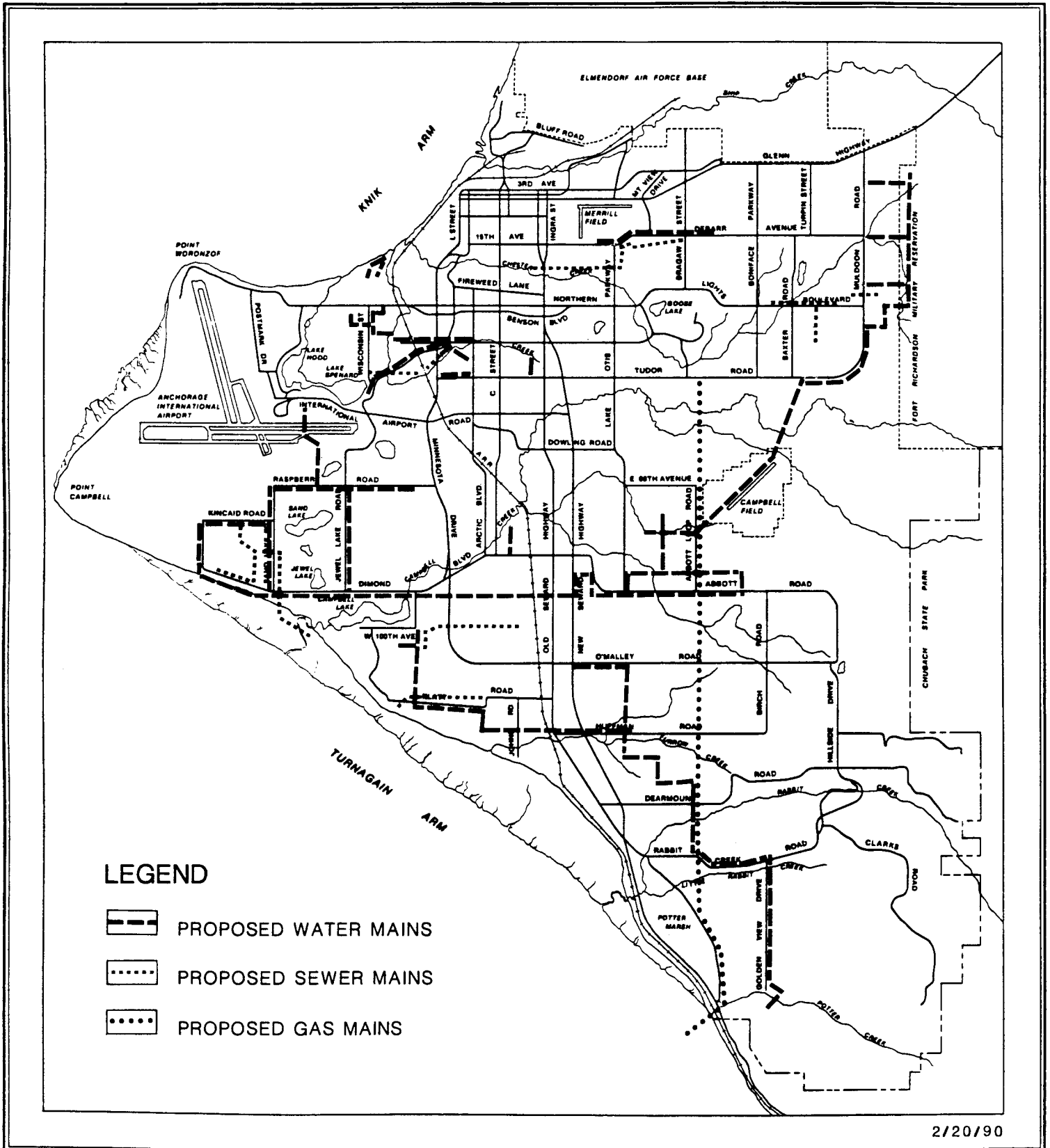
Utility Corridor Map

The alignment recommendations of the UCP are identified in Maps 4-1, 4-2, and 4-3. These maps identify the future major water, sewer, petroleum products, natural gas, and electrical

PROPOSED ELECTRIC TRANSMISSION FACILITIES



PROPOSED WATER, SEWER & GAS FACILITIES



power transmission within the Municipality of Anchorage that are expected to be developed over the next ten to twenty years. These recommendations reflect the utilities' best estimates regarding facility development, while the corridor alignments reflect a balance between the competing values of technical and engineering feasibility, economics, and both community and land use considerations. The facilities identified on Map 4-1 are derived from load generation and transmission evaluations prepared by the utilities. The municipality's master development plans for water and sewerage facilities are used as the basis for the recommendations given in Maps 4-2 and 4-3.

The alignments depicted in these maps are intended to be followed in subsequent platting, building permits, and related land use decisions. Minor departures from the precise alignments depicted in this plan may be authorized at the time of platting, conditional use, or other developmental or siting approvals, including detailed engineering routing studies conducted by the utilities. Changes to these alignments are also possible through either the plan amendment or plan revision procedures described subsequently in this chapter. When a modification of a corridor has been determined, this route will become the official corridor and the original alignment will be deleted from the plan map.

Interpretation of Plan Map--Electric Transmission Facilities

The alignments depicted in the plan maps are not precise, but rather identify a general location that may/will be further refined through subsequent engineering evaluations and permitting actions. Because of the sensitive nature of electric transmission facilities, it is appropriate to clarify how this plan implements the general alignments given in Maps 4-1 through 4-3 for these structures.

The location of electric transmission facilities specified in the UCP is the edge of the right-of-way of a proposed road and/or the outside edge of the existing road right-of-way. In the former, the location coincides with that situation where a road is intended to be enlarged, consistent with either the Long Range Transportation Plan or the OSHP, but right-of-way is not yet fully available. In this instance, the utility would locate at the edge of the eventual road right-of-way. In the instance where right-of-way has been acquired for the road, and it is presumed that the road will not be widened in the future, it is expected that the location of the utility would be at the outside edge of the road right-of-way. It is anticipated, because of the placement at the edge of the road right-of-way, that portions of the road's airspace would be utilized. To this extent, the road right-of-way is utilized; however, in terms of the actual

placement of utility towers, the location of these facilities will be dependent upon the design requirements and specifications of the municipality and/or ADOT/PF¹. These design requirements vary, but in general, for limited access facilities, the location of towers must occur outside the road right-of-way. Under municipal design requirements, it is possible to locate utility towers within the road right-of-way near the private property line.

3. RECOMMENDED REVISIONS--LAND USE REGULATIONS

While each of the aforementioned strategies for electrical transmission facilities appears sufficient, certain modifications to these methods should be made in order to resolve specific problems that have arisen.

Revision of Anchorage Municipal Code 21.80

This authority (AMC 21.80.050) now authorizes the platting authority to require (particular) dimensional easements adjacent to side and rear yards. This authority should be expanded to include a similar authority statement for front yards, since it is apparent that dedicated rights-of-way are often insufficient to accommodate all necessary electrical transmission improvements.

A new "design" section of AMC 21.80 is also recommended. This section would be a simple authority statement authorizing the platting authority to require all future subdivisions to conform to the recommendations of this plan, including the authority to preclude structures within areas of aerial or ground easements designed to protect electrical transmission facilities. This authority statement would ensure that the alignment, easement width, and related recommendations of the UCP are followed.

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It should be noted that in the case of state right-of-way, permits for placement of aerial and/or ground utility facilities will be reviewed on a case-by-case basis. However, permits are intended to be issued in existing rights-of-way only where roads are fully constructed to AMATS Long Range Transportation Plan and Transportation Improvements Program recommendations. Outside the AMATS area, the ADOT/PF six-year CIP and long-range plans will determine future roadway needs.

Addition to Supplementary District Regulations (21.45)

AMC 21.45 currently prohibits all structures within the area of road setback. Generally, this is sufficient to ensure the placement of structures outside of the area of expected, probable right-of-way. However, if a transmission facility must be relocated with a road widening, and does not meet the requirements of utility undergrounding in AMC 21.90, the relocated utility structures may be in conflict with authorized structure at the edge of the road setback area. This relationship is depicted in Figure 4-1. Under AMC 21.45.140, structures (D) shall be located beyond the area of road setback (B) and the yard area (C). However, structures may be located at the edge of the road setback (B) under AMC 21.45.140, but the easement requirements for the various types of electrical transmission easements (X and Y) conflict with authorized structure locations.

For this reason, this code section should be revised to preclude uses of land that are not compatible with these easement requirements. This authority would be used in combination with the revision to the subdivision authority. Specifically, it will ensure the proper placement of structures within areas not requiring subdivision (commercial tracts), or that have already been subdivided but now allow structures inconsistent with the utility easement requirements described previously.

4. DESIGN STANDARDS--ELECTRIC TRANSMISSION LINES

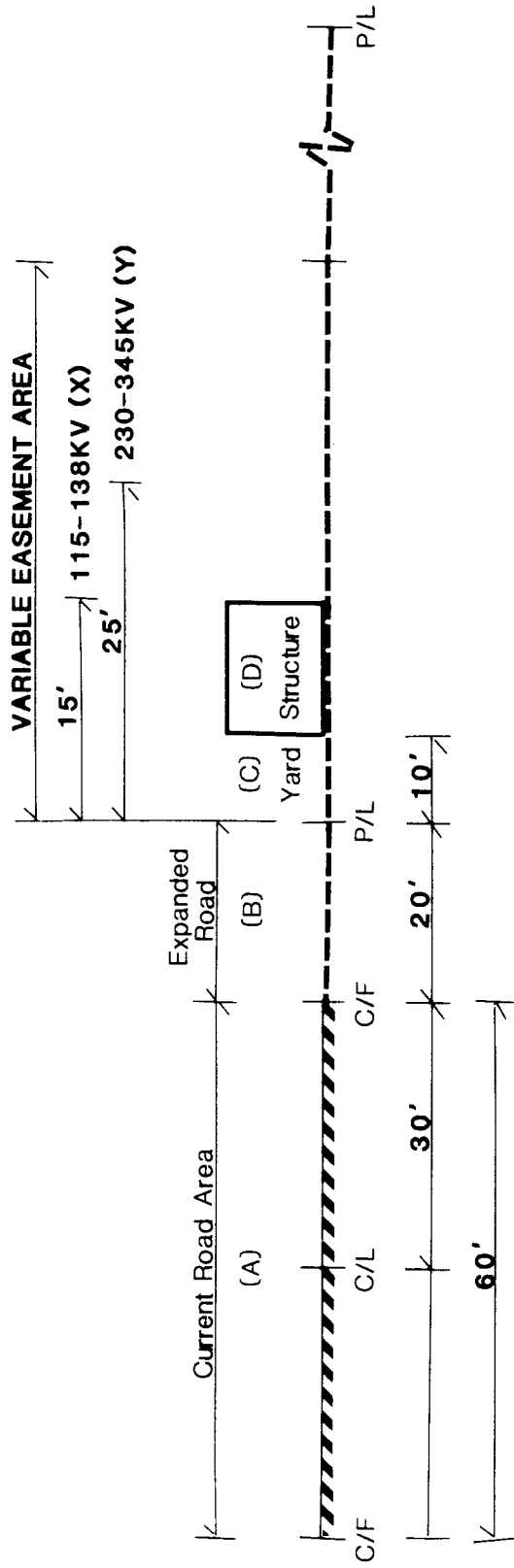
The most visible user of the utility transmission corridors will be the electric utilities. Because of their impact upon aesthetics and views, this section sets forth the general guidelines under which these facilities are to be constructed. It is not the intent of this section to place undue restrictions on the design of the facilities to be placed in these corridors, but to set forth standards to be adopted in their design. The goal is to insure compatibility with the communities where the facilities are located, and to help achieve the objectives of the UCP.

Establishment of Utility Corridor Use

The first utility to occupy a segment of a corridor shall have an affirmative obligation to seek the advice of other potential users of the corridor to insure compatibility and effective space utilization. If there is a persuasive reason to modify the location of the corridor, the other utilities shall be so informed, and have an opportunity to comment. If the parties are unable to agree over joint use of the corridor, the Department of Economic Development and Planning shall seek to mediate the dispute. The factors that are to be considered in this mediation effort should include the

FIGURE: 4-1

STRUCTURE PLACEMENT & ROAD DESIGN



C/F : CURB FACE
C/L : CENTER LINE
P/L : PROPERTY LINE

relative costs of alternative routings between the parties, the conclusions of environmental studies, and technical design considerations which may preclude the use of alternative routings. Should the mediation process fail, the Department of Economic Development and Planning shall refer the dispute to a technical committee for a binding decision. This committee shall be formed by Department of Economic Development and Planning, and shall consist of professionals knowledgeable of electric utility routing decisions but not directly involved in the dispute.

Undergrounding of Existing Lines

When a transmission facility is to be constructed on a route presently occupied by existing distribution voltage lines of the same utility, the undergrounding of these lines shall be considered. If lines below 69KV are not to be placed underground at the time when the transmission facilities are constructed, the utility shall be required to demonstrate one or more of the following:

1. That the differential between the cost of undergrounding and allowing the lines to be constructed as underbuilds on the new transmission structure lines exceeds a factor of three. This cost differential shall consider all of the expenses involved, including the savings resulting from the use of smaller transmission structures, if the lines are placed underground.
2. That there are particular, demonstrable technical or reliability reasons that the facilities should not, or may not, be placed underground.
3. That the environmental damage will be significantly greater with the installation of underground lines than that caused by allowing the lines to remain overhead.

If the utility can demonstrate that one or more of these criteria are met, it shall not be required to install the facility underground. This does not excuse the utility from reasonable mitigation measures which may be imposed for the overhead construction.

Aesthetic Design Considerations

All transmission structures shall be designed to meet reasonably aesthetic criteria, consistent with good utility practice. Transmission lines will be designed to occupy a minimal width of right-of-way at minimum heights, unless it can be demonstrated that for safety or sufficient engineering reasons a taller structure must be used. Of course, the use of narrow right-of-way is dependent upon the acquisition of satisfactory aerial easements.

Underground Transmission Lines in Scenic Areas

In areas of high scenic value to the community, the use of underground transmission lines shall be considered. Utilities not wishing to place the line underground shall demonstrate that the undergrounding of the transmission line satisfies one or more of the following reasons:

1. If the cost differential between underground and overhead facilities is greater than 1.5 for projects costing \$500,000.01 or more, or 2.0 for projects costing \$500,000.00 or less, the cost comparison shall include all anticipated costs, including the expense of condemnation and other reasonable mitigation measures imposed for overhead line construction.
2. There are demonstrable technical or reliability reasons the facilities should not, or may not, be placed underground. The utility will not be required to place short sections of transmission circuitry underground if this will substantially impact reliability.
3. The environmental damage will be greater with the installation of underground facilities than that caused by installing the lines overhead.
4. An accepted environmental report of the utility has concluded that the undergrounding of the circuit in question is not feasible.

If the utility demonstrates that one or more of these criteria can be met, it shall not be required to install the facilities underground. This shall not excuse the utility from reasonable mitigation measures which may be imposed for overhead construction or from the consideration of alternate routings.

5. INCORPORATION OF THE UTILITY CORRIDOR PLAN IN UTILITY STUDIES

It is recognized that the utilities will, for their own purposes, perform, or have performed, studies to determine the need for future transmission lines. An integral part of these studies is the selection of routings of such lines. Each of the utilities shall incorporate the design, width, and alignment recommendations of the UCP in its transmission studies.

6. PLAN AMENDMENT AND REVISION

This plan specifies future utility corridors given competing environmental, social, technical, and land use considerations. It is inevitable that departures from these recommended corridors will occur over time as conditions, technologies, and social

objectives change. To account for this, both plan amendment and plan revision processes are recommended.

It should be emphasized that plan amendment or revision procedures are for major deviations from the proposed utility corridor. Deviations resulting from the detailed engineering analysis of a utility corridor, and generally consistent with the geographic alignment depicted on Maps 4-1 through 4-3, shall be considered to fall under the "flexibility-in-alignment" criterion discussed previously. If the Department of Economic Development and Planning review of a proposed corridor alignment reveals a significant departure from the corridor depicted in Maps 4-1 through 4-3, the decision to process a plan amendment will be confirmed by the Planning Commission under the consent agenda before such an amendment process will actually be initiated.

Plan Amendment Process

Should transmission routes other than those identified on the plan map be requested, including routes not depicted at all on the plan map, an evaluation of alternative routes shall be required. Although there is a presumption of preference for the plan map route(s) alternative routes can be selected, but the utility must identify and document the advantages of the alternative route relative to the one identified on the plan map. The considerations described in Appendix B shall be addressed in a report submitted to the Department of Economic Development and Planning for review prior to a public hearing. The Planning Commission shall be that municipal entity authorized to grant major deviations from the corridors specified in the plan map. Appeals of these decisions shall be made to the Anchorage Municipal Assembly, similar to the manner described in Anchorage Municipal Code 21.15.015.

Plan Revision

The UCP shall be updated at least every five years in order to maintain consistency with current utility planning as well as land use and transportation plans. This revision process is dissimilar from the plan amendment procedure. The amendment procedure is intended to focus on specific utility corridors, while the revision process is designed to thoroughly reevaluate all of the corridors identified in the plan map. It is recommended that a joint utility/planning committee representing all affected state, municipal, and utility interests, be formed to assist in the revision of the UCP. This organization would also function as a working group that would perform an annual review of the recommendations of this plan in order to expedite the revision process.